CAPTAIN
California Autism Professional Training and Information Network

Skill Based Workshop
Severe Aggression
CAPTAIN Summit
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Portions of this presentation developed by Gregory P. Hanley, PhD., BCBA-D
For more information: www.practicalfunctionalassessment.com

Why do you think "routines" controlled and dictated by problem behavior persist for individuals who teach or interact with students with challenging behaviors?

"Routines"?

- Because the "routine" prevents behavior from occurring
  - We learn to ***avoid*** the problem
- We learn to modify students' difficult behaviors by changing how we interact with them…
  - ***And it WORKS!!!***

Purpose of Today

- *Learn about & apply Evidenced Based Practices for severe aggression & self-injury*

  - **This is a multiple-step process that starts with understanding why a behavior happens**

Functional Assessment

- Process to determine the variables influencing problem behavior
  - Process includes Discovery & Demonstration

If we are going to use a Functional Assessment to understand behavior…

- Then we must assume:

- Behavior:
  - *reinforced*
  - **operant**
  - results in specific outcomes in certain situations
- Medical causes have been ruled out

Goals of a Functional Assessment

- Figure out what **purpose a behavior serves** for an individual
  - Helps us to better understand the ***link between events in the environment and behaviors***
- **Identify the situations that evoke (or cause) behavior**
- **Identify the consequences that maintain behavior**

The Allergy Test

What are Functions of Behavior?

- **Positive Reinforcement**
  - We want attention (social)
  - We want something (tangible)
  - We like the way it feels (sensory)
- **Negative Reinforcement**
  - We want to get out of something (escape/avoidance)
  - We like that the behavior takes away an unpleasant feeling (pain attenuation)

Functions of Behavior

- **Social positive reinforcement**
  - Attention or tangible
    - For example, aggression may occur because of the consequences it produces
      - Comforting statements ("Are you ok?")
      - "Do you need something?"
      - Attempts to engage the individual in an alternative activity (give them something they want)
    - These sorts of reactions often seem unavoidable & may even interrupt the behavior temporarily
      - However, these contingent social interactions may inadvertently function to maintain behavior over time

Functions of Behavior

- **Automatic positive reinforcement**
  - Sensory stimulation (it feels good)
    - Behaviors that produce their own reinforcement
      - Visual, auditory, tactile & others
      - Examples
        - Bruxism
        - Rumination
        - Some cases of SIB
        - Variety of repetitive behaviors collectively described as "stereotyped acts

Functions of Behavior

- **<u>Social negative reinforcement</u> (escape/avoidance)**
  - We want to get out of something
  - Involves the termination of an ongoing activity
    - Individuals may get aggressive, disruptive or “meltdown” when they are asked to complete assigned work may not be required to finish their work
      - Sent home or to "time out" or given a “break”
    - May result in temporary decrease, however next time work is presented, the individual may “meltdown” as a way of getting out of work

Functions of Behavior

- **Automatic negative reinforcement**
  - It feels good (by removing something)
    - Pain of a toothache → relived by rubbing jaw
    - Insect bite → scratching decreases discomfort.
    - Head banging → decreases pain from ear infection

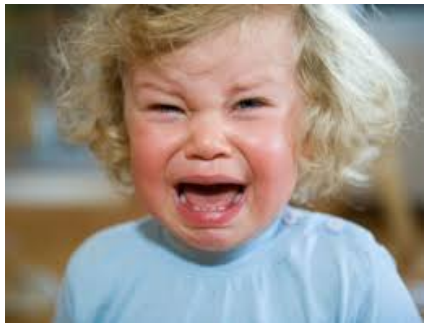
Single & Combined Contingencies

- **Single contingencies**:
  - Attention or toys (social-positive reinforcement)
  - Escape/avoidance (social-negative reinforcement)
  - Sensory/non-social (automatic reinforcement)
- **Combined contingencies**:
  - Attention and Toys
  - Escape to toys
  - Escape to toys and attention
  - Escape to automatic reinforcement
  - ***Compliance with mands (control)***
  - Escape to access to rituals, preferred conversations
  - Escape to controlling people or objects
  - Etc…..

Let's Practice… What's the function?

Jake

- Anytime Jake is asked to practice writing his name, he begins to groan & grunt.
- If pushed, he may begin to yell, scream and begin to break or throw things.
- When the request to write his name is withdrawn, Jake immediately calms down.
- As a result, no one asks Jake to write his name.



What's the function?

- Ella likes to be the class clown.
- When her teacher is talking, she has a tendency to make jokes, which is very disruptive to the classroom and instruction.
- As a result, Ella has been sent to the principal numerous times.

- Unfortunately, being sent to the principal has not been working since Ella will almost immediately disrupt the class upon her return.

Antecedent →	Behavior →	Consequence
Motivating operation →	Problem Behavior →	Reinforcement
What is Jake's motivation?	Groan, grunt…yell & scream…throw things	Getting out of writing his name (escape)
What is Ella's motivation?	Class clown	Attention

Antecedent →	**Behavior** →	**Consequence**
Motivating operation →	Problem Behavior →	Reinforcement
Teacher attending to a student	(another student) flips desk	Teacher's attention
Teacher says, "Put away laptops, time to line-up for PE"	Self-injury	Teacher allows a little more time on laptop
Teacher says, "Come inside, time for work"	Tantrum	Teacher tries to calm child with reminders of good things & starts to comply with requests from child

Let's Review a Case…

- 15-year old female student
- IEP eligibility:
  - *Emotional Disturbance*
- Language:
  - Verbal, communicates in full sentences
- School Placement:
  - Gen Ed
- Problem Behavior:
  - Elopement, leaving the classroom without permission
  - "Shut" down; refusing to do any work
- Situations during which behaviors occur:
  - Presented with work she doesn't want to do
  - When not allowed to do what she wants to do

So where are we so far?

- Behavior is learned
- It serves a specific purpose
  - Depending on what the student is motivated for
    - Escape?
    - Attention?
    - Control?
    - All of the above?
  - **<u>Single or combined contingencies</u>**
- How do we figure this out?

Practical Functional Assessment for Severe Problem Behavior

Portions of this presentation developed by Gregory P. Hanley, PhD., BCBA-D
For more information: www.practicalfunctionalassessment.com

Functional Assessment Process

Indirect Assessment
Interview

Descriptive Assessment
Observe

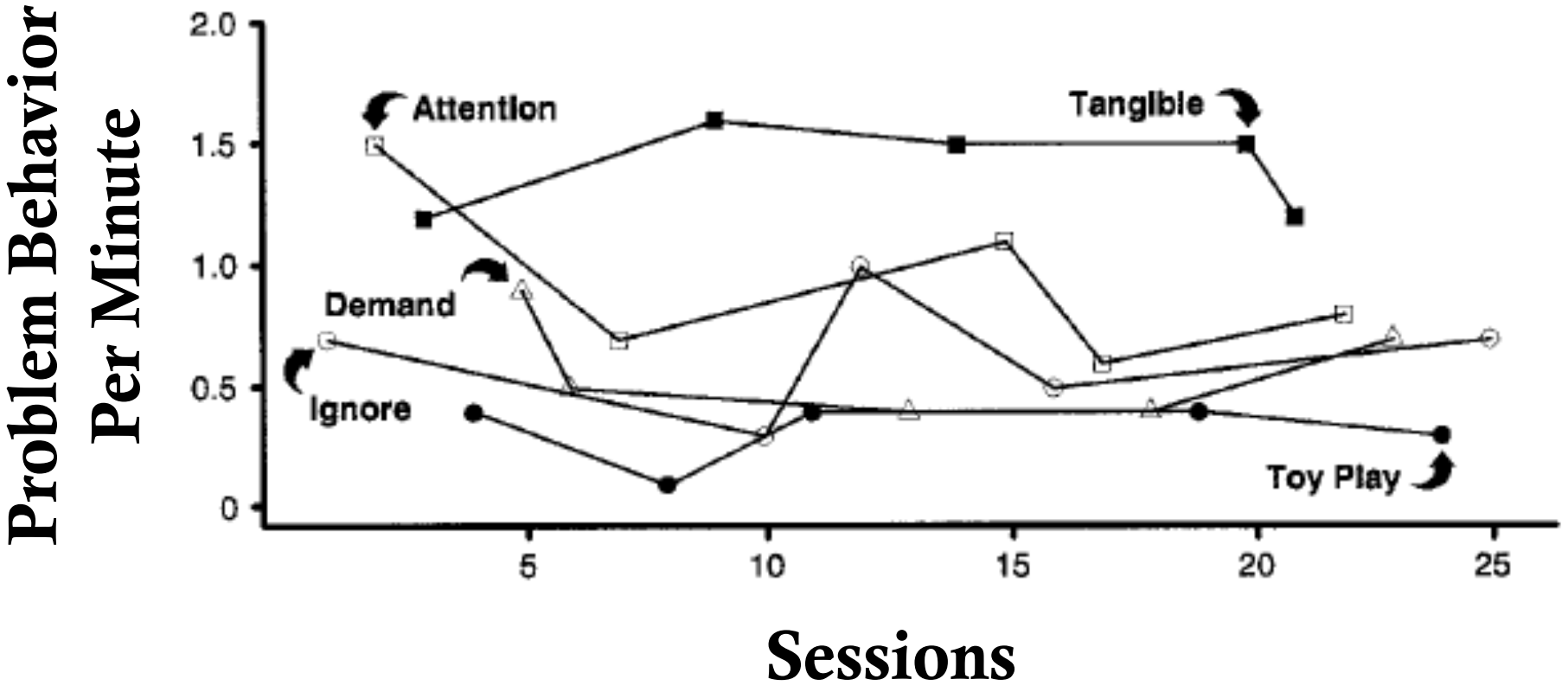
Functional Analysis
Observe while manipulating

Discovery and Demonstration

Defining Features of Standard Functional Analysis (SFA)

- Multiple test conditions
- Uniform test conditions
- Isolated test contingencies
- Reinforce dangerous behaviors only
- Toy-play control condition

Example of Standard Functional Analysis



Outcomes of Standard Functional Analysis: *Differentiated Analysis?*

- **<u>It does work</u>**
  - Differentiated analysis based on literature reviews
    - Hanley et al. (2003): 94%
    - Beavers et al. (2014): 92%
- **<u>Case Series</u>:**
  - Hagopian et al. (2014): 47%
  - Slaton et al. (2016): 44%

Outcomes of Standard Functional Analysis: *Larger Treatment Effects?*

- Yes – treatments are more effective when functional analysis used vs. when its not used
  - Campbell (2003)
- However, larger treatment effects obtained when treatment implemented in (almost exclusively) controlled settings.
  - ***What would happen if we took this out of the lab?***

Summary on Standard Functional Analysis (SFA)

- It does show differentiation
- It does lead to large treatment effects
- There are situations under which a SFA is useful
- However…
  - Limitations in its use in a relevant context (school, home, community)
    - Social validity
  - Requires high level of expertise & control

So what is a possible alternative?

IISCA

Interview-informed Synthesized Contingency Analysis

What does the IISCA process involve?

- Structured observations
- Open-ended interview
- **Synthesized analysis**
  - **Combined contingencies**
- Does *NOT* involve:
  - Descriptive assessments
  - Close-ended assessments (FAST, MAS, QABF)
  - Standard functional analysis

Standard Functional Analysis	Interview-informed Synthesized Contingency Analysis
Multiple test conditions	Single test conditions
Uniform test conditions	Individualized test conditions
Isolated test contingencies	Synthesized contingencies
Reinforce dangerous behavior	Reinforce precursors to, and, dangerous behavior
Toy-play control condition	Test-matched control

Open-Ended Interview

- Open-ended interview designed to help determine what factors are contributing to challenging behaviors.
- Talk to someone who knows the student, has seen the behavior, and has had to manage it (*teachers & aides*).
- Asks specific questions regarding what triggers behavior.
- Used for structured observation & IISCA

How to use the interview?

- Use it to help you identify and understand why behavior is occurring
- ***Questions to ask*:**
  - Under what conditions or situations are the problem behaviors most likely to occur?
    - When they are alone?
    - When they ask for something & its denied?
  - Are there certain situations or **activities that seem to trigger the behavior?**
    - **Transitions? From where to where?**
  - Are there certain situations in which problem behaviors *DO NOT* happen?

More questions…

- What seems to trigger behavior?
- How do you & others react or respond to the problem behavior?
- ***Once the behavior starts, what can you do that calms him/her down?***
- Can you do anything that distracts him/her from the behavior?
- Do you think he/she is trying to communicate something with his/her problem behavior, if anything?
- Do you think the behavior is a form of sensory stimulation? If so, what gives you that impression?

Open-Ended Functional Assessment Interview

Developed by Gregory P. Hanley, Ph.D., BCBA-D (Developed August, 2002; Revised: August, 2009)

Date of Interview: Child/Client: Interviewer:

Respondent: Respondent's relation to child/client:

RELEVANT BACKGROUND INFORMATION

1. His/her date of birth: Age: yrs mo Check one: Male Female
2. Describe his/her language abilities:
3. Describe his/her play skills and preferred toys or leisure activities:
4. What else does he/she prefer?

QUESTIONS TO INFORM THE DESIGN OF A FUNCTIONAL ANALYSIS

To develop objective definitions of observable problem behaviors:

5. What are the problem behaviors? What do they look like?

To determine which problem behavior(s) will be targeted in the functional analysis:

6. What is the single-most concerning problem behavior?
7. What are the top 3 most concerning problem behaviors? Are there other behaviors of concern?

To determine the precautions required when conducting the functional analysis:

8. Describe the range of intensities of the problem behaviors and the extent to which he/she or others may be hurt or injured from the problem behavior.

To assist in identifying precursors to dangerous problem behaviors that may be targeted in the functional analysis instead of more dangerous problem behaviors:

9. Do the different types of problem behavior tend to occur in bursts or clusters and/or does any type of problem behavior typically precede another type of problem behavior (e.g., yells preceding hits)?

To determine the antecedent conditions that may be incorporated into the functional analysis test conditions:

10. Under what conditions or situations are the problem behaviors most likely to occur?
11. Do the problem behaviors reliably occur during any particular activities?
12. What seems to trigger the problem behavior?
13. Does problem behavior occur when you break routines or interrupt activities? If so, describe.

14. Does the problem behavior occur when it appears that he/she won't get his/her way? If so, describe the

To determine the test condition(s) that should be conducted and the specific type(s) of consequences that may be incorporated into the test condition(s):

15. How do you and others react or respond to the problem behavior?

16. What do you and others do to calm him/her down once he/she engaged in the problem behavior?

17. What do you and others do to distract him/her from engaging in the problem behavior?

In addition to the above information, to assist in developing a hunch as to why problem behavior is occurring and to assist in determining the test condition(s) to be conducted:

18. What do you think he/she is trying to communicate with his/her problem behavior, if anything?

19. Do you think this problem behavior is a form of self stimulation? If so, what gives you that impression?

20. Why do you think he/she is engaging in the problem behavior?

Submit by E-mail

Case Example: ***Function***

- 14-year old boy; Dx w/Prader Willi
- Intense aggression & property destruction
  - Hitting, kicking, biting & breaking furniture
  - 8 hospitalizations in the last year due to severe aggression
- Results of parent interview:
  - Triggers:
    - Family has a plan for dinner, that plan changes
    - Boy indicates his stomach hurts & insists on being taken to ER
    - After school routine involves going on walk, but routine is interrupted
  - ***Why is behavior happening? What is function?***
    - **Attention? Tangible? Escape? Control?**

Case Example:
Test & Comparison

- Triggers:
  - Attention
  - Tangible
  - Control?
    - Request for something to be done "his way"
- ***How would you test your hypothesis?***
  - Give him an assignment with specific instructions, then change the instruction.
  - Provide choices of 3 foods, then change the choices after he decides.
  - Say you are going for a walk, then change plan.
  - When he request something, say ok, then change your mind.
- ***What is your comparison?***

After the Interview – Develop the IISCA

- **<u>Test your hypothesis</u>**
  - Turn behavior on (test) & off (comparison)
- Based on the interview, set up conditions that allow you to evaluate how they influence behavior.
- Development of assessment plan

IISCA = Interview Informed Synthesized Contingency Analysis

Task Analysis for Practical Functional Assessment

- 1) Describe the problem behavior & their precursors
- 2) Describe reinforces to be synthesized
  - Provided following behavior
- 3) Describe the synthesized establishing operation
  - Situation presented at the beginning of the test session
- 4) Based on #2 & #3 above, describe your IISCA
  - Who? Where? Any Materials?
  - Test:
  - Control

Let's practice some more: Turning Behavior On & Off

- Aggression (hitting & slapping others) maintained by access to iPad.
  - What does this mean?
    - *Single or combined contingency?*
  - How would you test this hypothesis?
    - How can you ***prove*** that aggression is happening because of access to the iPad?
  - What would your comparison (control) be?

Lets practice some more: Turning Behavior On & Off

- Aggression (hitting & slapping others) maintained by escape from academic demands and access to preferred toys.
  - What does this mean?
    - *Single or combined contingency?*
  - How would you test & prove this hypothesis?
  - What would your comparison (control) be?

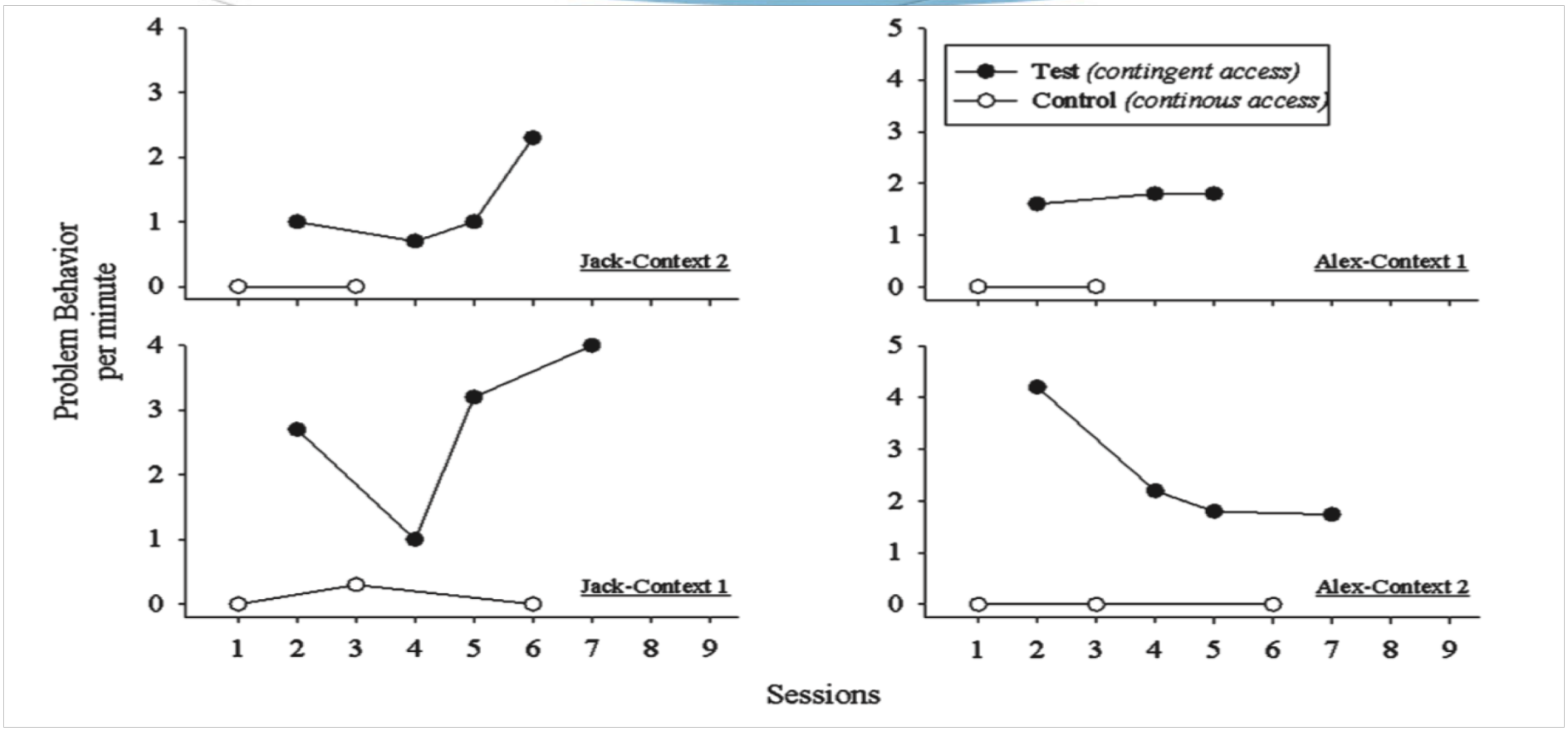
One more time: Turning Behavior On & Off

- Aggression (hitting & slapping others) maintained by escape from social attention?
  - What does this mean?
    - *Single or combined contingency?*
  - How would you test & prove this hypothesis?
  - What would your comparison (control) be?

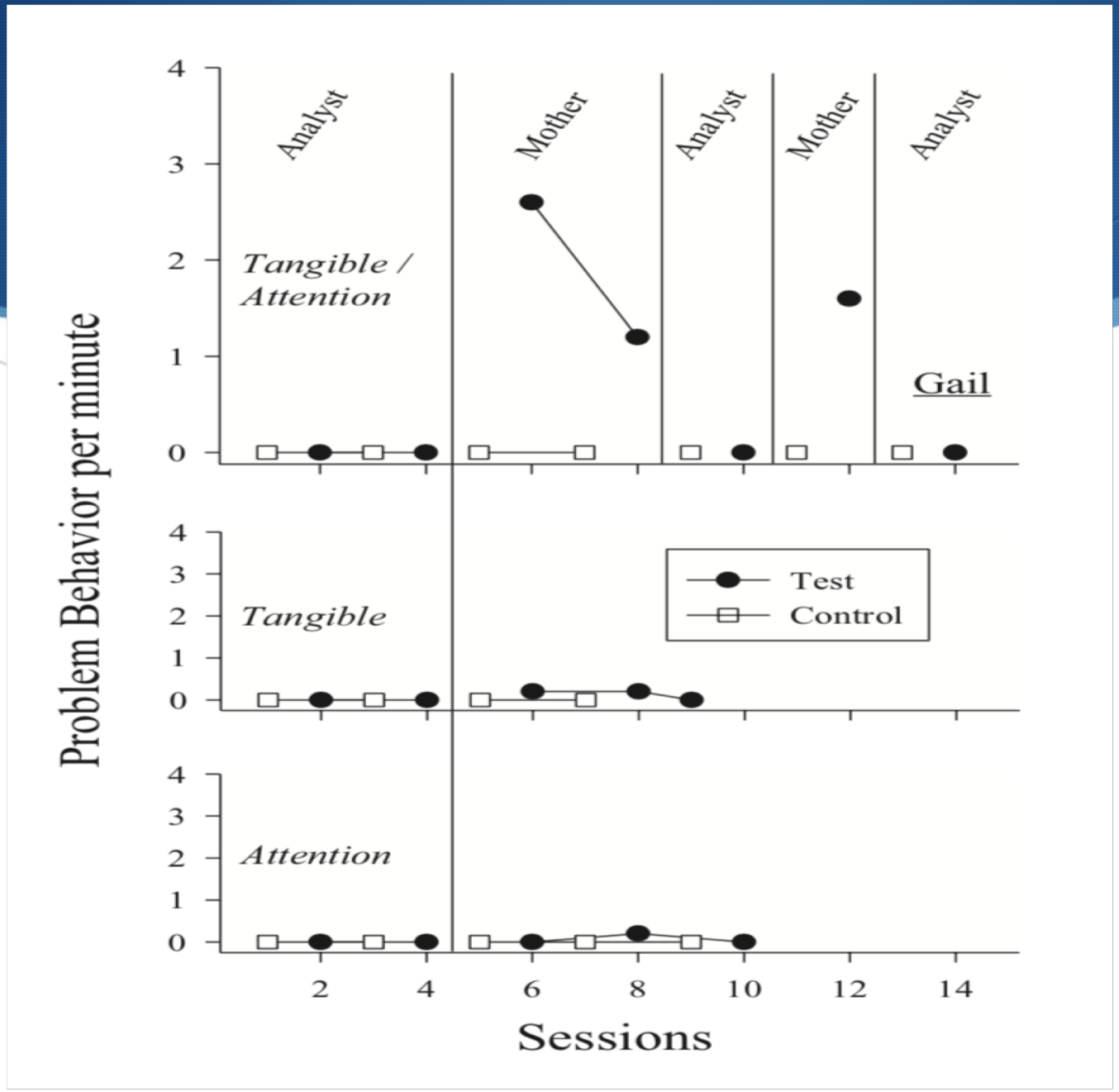
OK…last one: Turning Behavior On & Off

- Aggression (hitting & slapping others) maintained by "control" and wanting to do things "my way".
  - What does this mean?
    - *Single or combined contingency?*
  - How would you test this hypothesis?
  - What would your comparison (control) be?

Test vs. Control:
Turning Behavior On & Off



Ghaemmaghami, Hanley & Jessel (2016), Contingencies Promote Delay Tolerance



Hanley, Jin, Vanselow & Hanratty (2014), Producing Meaningful Improvements in Problem Behavior of Children with Autism via Synthesized Analyses and Treatments

Why am I doing all this?

- *How does "turning behavior on & off" make me better equipped to deal with the challenges of the students I work with?*
  - By knowing "why" behavior happens, you can come up with a behavior plan based on the **function of behavior**

Skill-Based Treatment: *FCR*

- Describe initial (simple) & complex Functional Communication Response (FCR):
  - **Simple**
    - "Toys please"
    - "My way please"
  - **Complex**
    - After simple is taught
      - "Excuse me please"
      - "May I have (x) please" (saying it slowly & softly)

FCR = Functional Communication Response

- Teaching procedures
  - Prompt level?
  - "Expectant look"

Skill-Based Treatment: *Delay & Tolerance*

- Describe denial/delay signals
- Which tolerance responses will you teach?
  - Verbal?
  - Nonverbal/gesture?
- Teaching procedures?

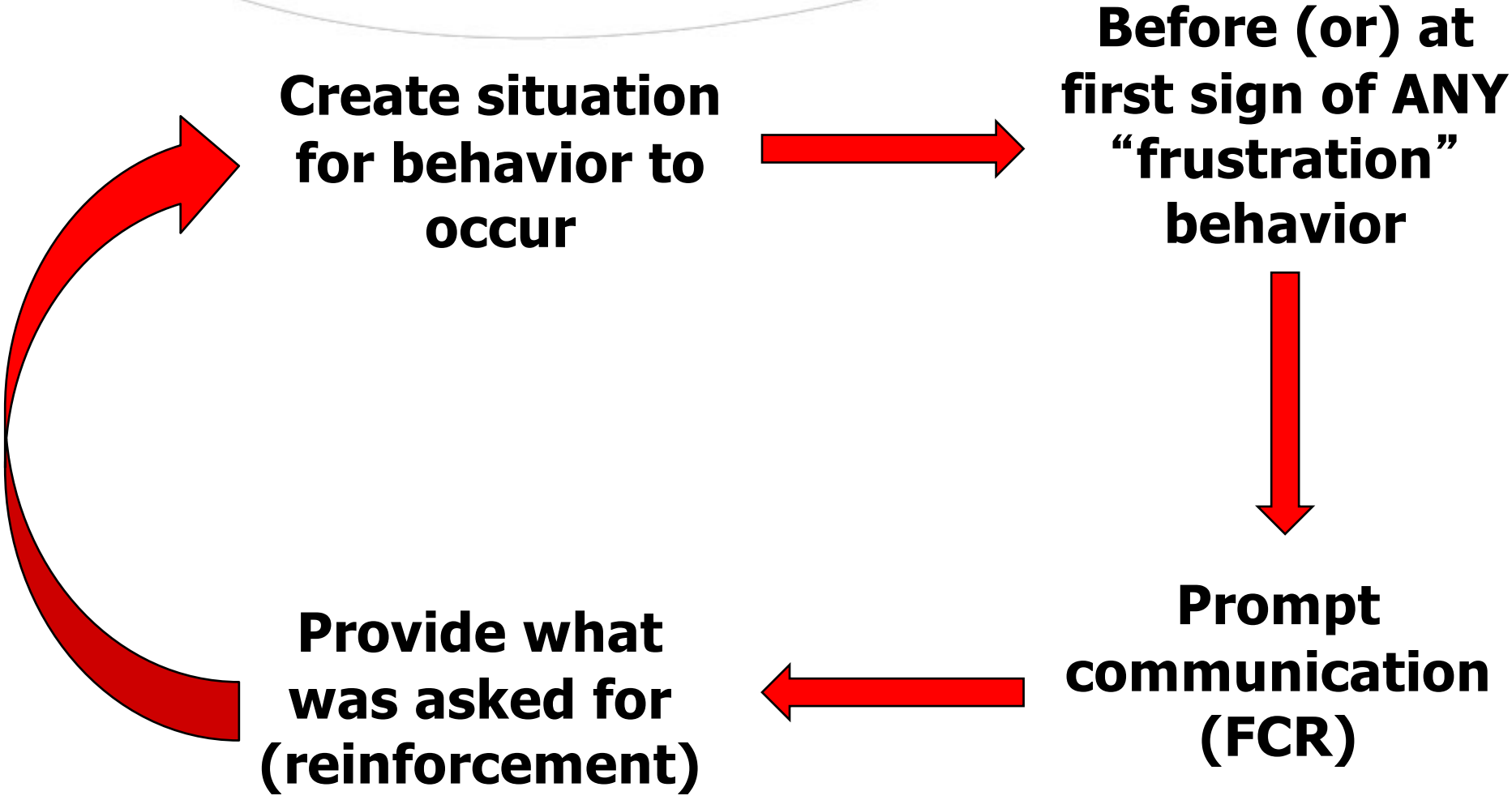
Skill-Based Treatment: *Activities & Engagement*

- Describe what you would like individual to do when they cannot have their reinforces
  - Behaviors that will be instructed or expected during the delay that will be strengthened via termination of the delay
  - BE SPECIFIC on behaviors:
    - Describe type of behavior

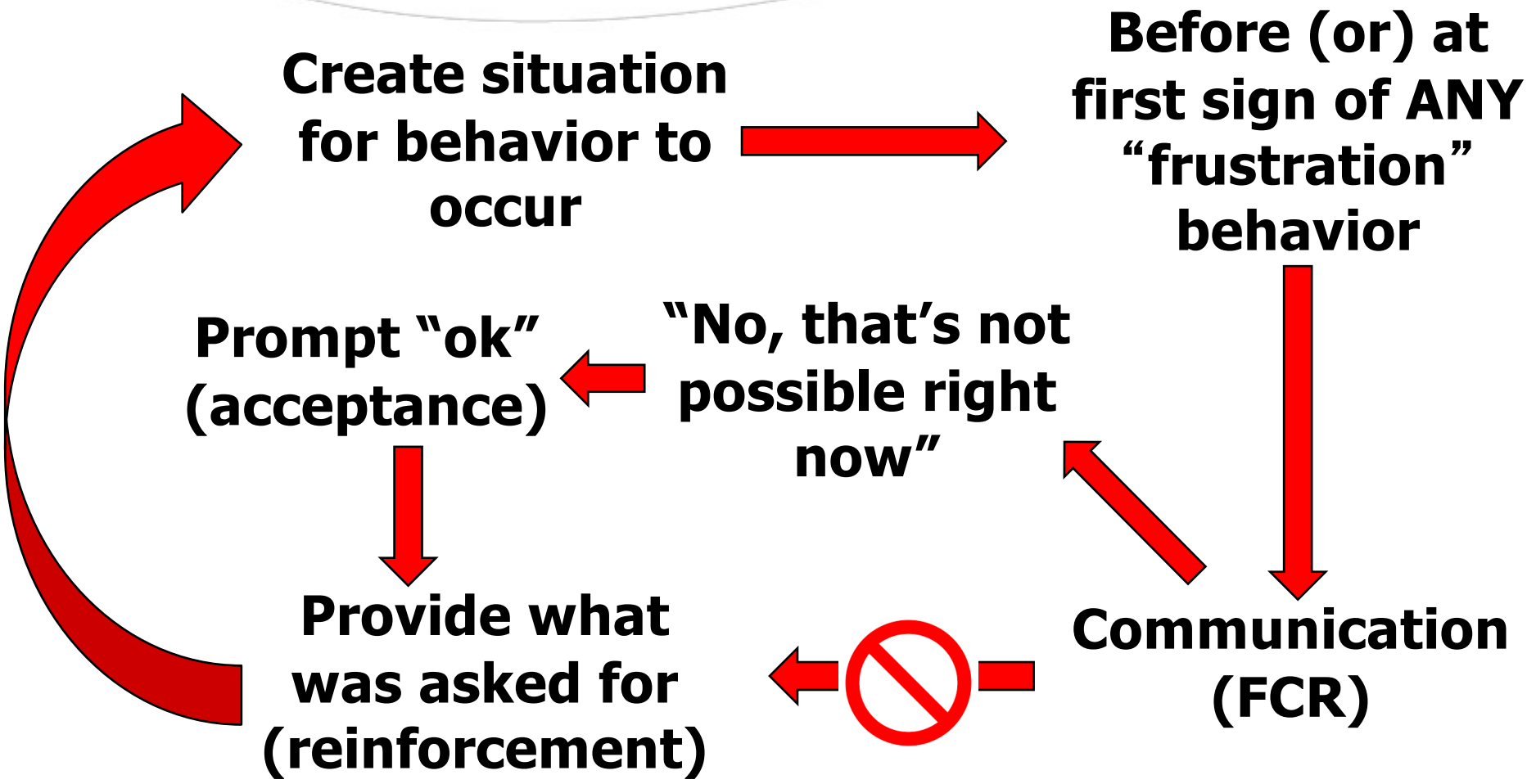
- ***Time based vs. Contingency-based delay***

Ghaemmaghami, Hanley & Jessel (2016), Contingencies Promote Delay Tolerance

Functional Communication Response (FCR)



Delay & Tolerance (accepting disappointment)



So what have we done so far?

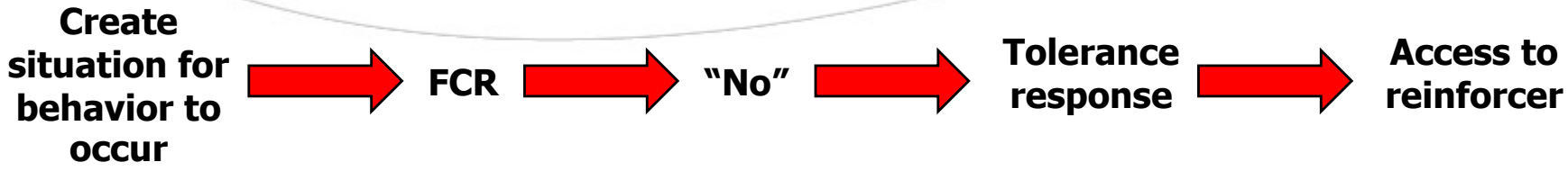
- 1) Taught a FCR (communication)
- 2) Taught delay & tolerance (accepting disappointment)
  - But…***what are we missing?***
- ***What's next?***
  - **Activities & engagement**
    - Teach tolerance for a longer delay

Teaching Tolerance for Delays:
Why its better to be doing something while you wait?

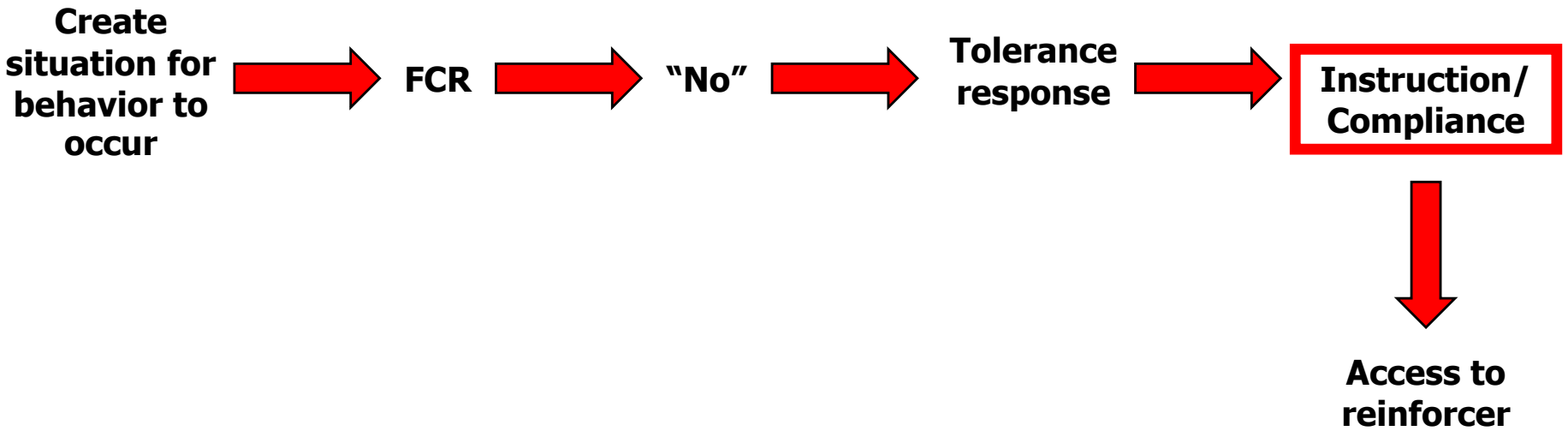
- **Contingency-based Progressive Delays (CBPD)**
  - Delay based on a response requirement
  - "waiting" ended after a task was completed
- **Time-based Progressive Delays (TBPD)**
  - Delay based on time alone
  - "waiting" ended when time expired

Ghaemmaghami, Hanley & Jessel (2016), Contingencies Promote Delay Tolerance

Activities & Engagement: Tolerance for a Delay

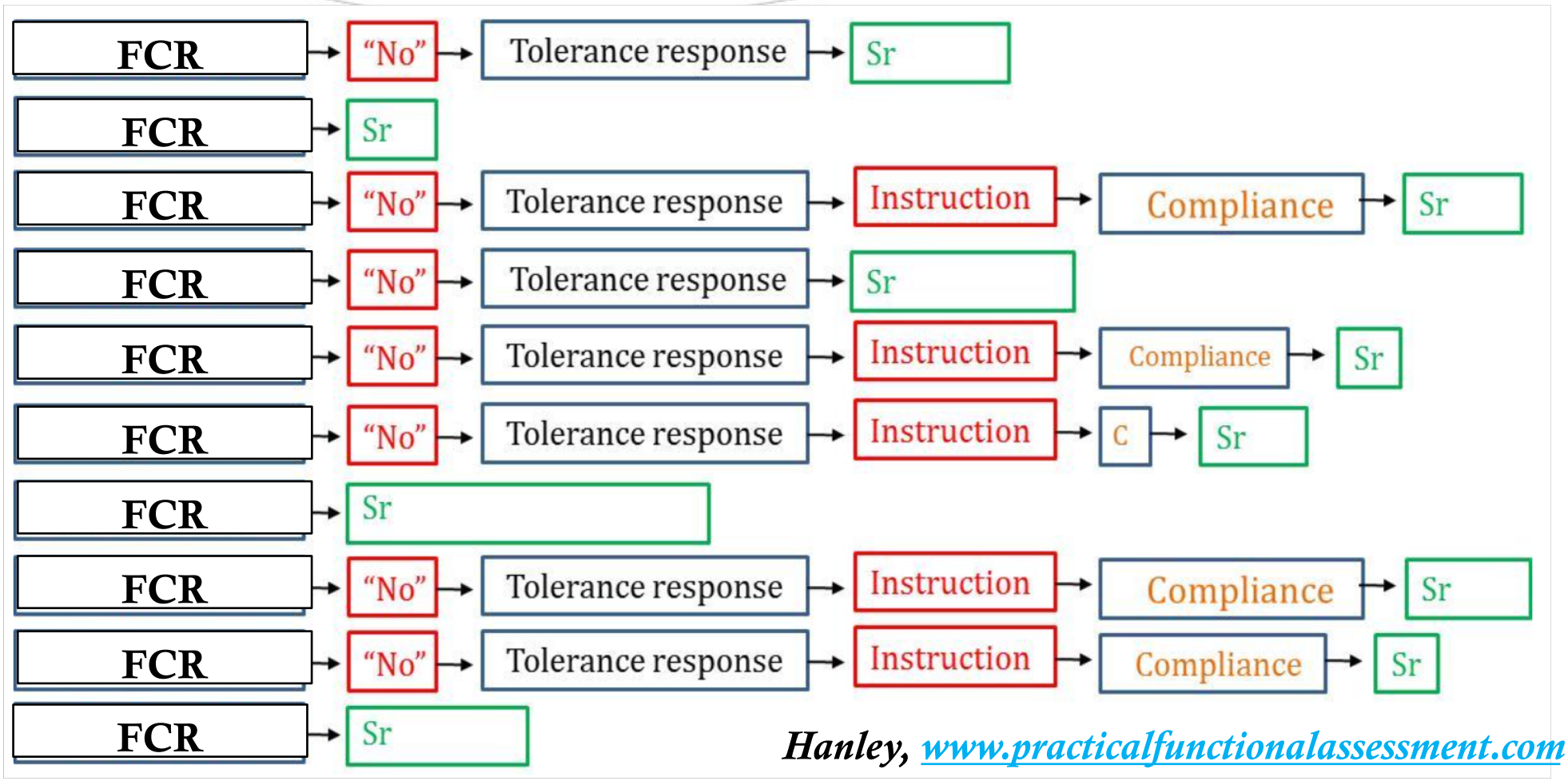


What we need to teach next



Example of Treatment Schematic

Create situation for behavior to occur



Hanley, www.practicalfunctionalassessment.com

Function-Based Treatments

- ***Prevention***
  - **<u>Antecedent based interventions</u>**
    - Positive programming
    - Enriched Environment
    - Teaching replacement behaviors (FCT/FCR)
      - Accepting disappointment
    - Reinforcement for "free" (NCR)
    - Competing items
- ***Reaction***
  - **<u>Consequence based interventions</u>**
    - Extinction
    - Procedures to decrease behavior
- ***Which one of these you use, depends on the function of the behavior***

Prevention of Behaviors Maintained by Escape

- **Positive programming**
  - "Mix" easy & difficult demands
  - "Mix" & vary instructional demands
  - Errorless learning
  - Pace instruction properly
  - Teach to fluency
  - Use visuals (as appropriate)
  - Frequent breaks

Teaching Replacement Behaviors

- Functional Communication Training
  - FCT
- Functional Communication Response
  - FCR

Teaching Replacement Behaviors

- **Escape**
  - "Break please"
  - "I need help"
  - "Not now"
  - Gesture or sign
- **Tangible**
  - "Can I have (x) please?"
  - "My way"
  - Gesture or sign
- **Attention**
  - "Play with me"
  - Talk to me"
  - Gesture or sign
- **Accepting Disappointment**
  - "That's's ok"
  - "Fine"
  - Gesture or sign

Let's Review a Case…

- 9-year old male student
- IEP eligibility:
  - *ASD*
- Language:
  - Non-verbal, communicates via PECS & gestures
- School Placement:
  - SpecEd (SDC)
- Problem Behavior:
  - Stereotypy (loud nonsensical vocalizations, hand-flapping)
- Situations during which behaviors occur:
  - During circle time & stations
  - Free time & breaks
  - Recess & lunch

Let's Review a Case…

- 16-year old male student
- IEP eligibility:
  - *ID (primary)*
  - *ASD (secondary)*
- Language:
  - Non-verbal, hand-leading & pointing
- School Placement:
  - SpecEd (SDC)
- Problem Behavior:
  - Self-injury (head banging)
- Situations during which behaviors occur:
  - During circle time & stations
  - Academics

Generalization

- Train & hope…
  - We "hope" to get generalized behavior, even when not explicitly programmed for
  - Need a more systematic approach

Stokes & Baer (1977), An Implicit Technology of Generalization

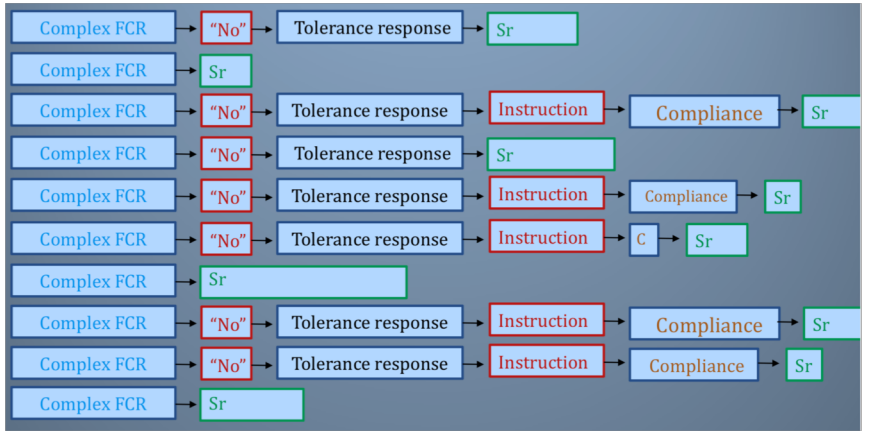
Generalization

- Sequential Modification:
  - Implement behavior change programs in every condition/setting/situation in which you want it to occur…***DO NOT JUST EXPECT IT TO HAPPEN!***
- Introduce Naturally occurring Contingencies:
  - What are the natural results of teaching a student how to join a group?
    - Behavioral Trap
  - Choose your FCR carefully (e.g., "My way")

Stokes & Baer (1977), An Implicit Technology of Generalization

Generalization

- Train Sufficient Exemplars & Train Loosely:
  - ”Break please”
  - “Not now”
  - “I don’t want to”
  - Gestures or card exchanges
  - Across staff (teachers, aides) & settings
  - Treatment schematic = “loose” training



Stokes & Baer (1977), An Implicit Technology of Generalization

Generalization

- Used Indiscriminable Contingencies:
  - Intermittent schedules of reinforcement increase resistance to extinction
    - That is…
      - *Not "knowing" what's going to happen*
        - Will I get the reinforcer or not?
      - *Makes it more likely that I will keep responding*

Stokes & Baer (1977), An Implicit Technology of Generalization

Generalization

- Program Common Stimuli:
  - Whatever you use in "real life"…use during training
    - Social skills – use peers from classroom
    - Academics – use worksheets, books, materials (table & chairs from actual classroom)

Stokes & Baer (1977), An Implicit Technology of Generalization

In conclusion…

- Take time to ***Discover & Demonstrate***
  - The assessment process & an understanding of why a behavior occurs is crucial
  - Single & combined contingencies
  - Motivation?
- **IISCA**
  - Test & compare (control); turn behavior on & off
- **Skill-based Treatments**
  - FCR
  - Tolerance (learning to accept disappointment)
  - Delays (CBPD)
- **Function-based Treatments**
- **Prevention**
- **Generalization**

Thank You!

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